

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
18 January 2001 (18.01.2001)

PCT

(10) International Publication Number  
**WO 01/04271 A3**

(51) International Patent Classification<sup>7</sup>: C12N 15/86,  
7/04, C07K 14/14, C12N 15/62, A61K 38/17, C07K  
14/54, A61K 48/00

(21) International Application Number: PCT/US00/19042

(22) International Filing Date: 12 July 2000 (12.07.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/143,425 13 July 1999 (13.07.1999) US

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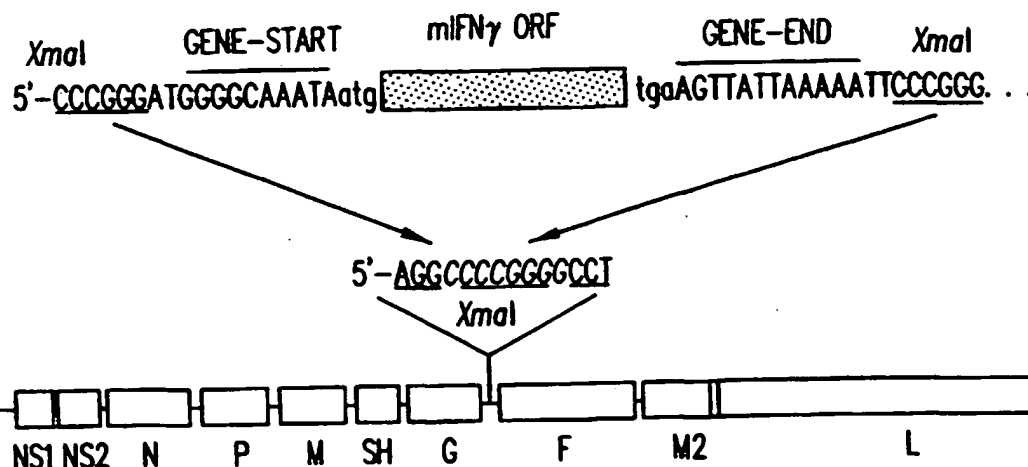
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(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,  
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,  
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,  
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: RESPIRATORY SYNCYTIAL VIRUSES EXPRESSING IMMUNE MODULATORY MOLECULES



(57) Abstract: Recombinant respiratory syncytial virus (RSV) are provided which express one or more immune modulatory molecules. The recombinant virus is modified by addition or substitution of a polynucleotide sequence encoding the immune modulatory molecule, which is preferably a cytokine. Introduction of the cytokine increase, decrease, or otherwise enhances aspects of viral biology and/or host immune responses to RSV to facilitate vaccine use of the virus. Cytokines for use within the invention include but are not limited to interleukin 2 (IL-2), interleukin 4 (IL-4), interleukin 5 (IL-5), interleukin 6 (IL-6), or interleukin 18 (IL-18), tumor necrosis factor (TNF) alpha, interferon gamma (IFN), and granulocyte-macrophage colony stimulating factor (GM-CSF). The polynucleotide or immune modulatory molecule is preferably added or substituted into the recombinant viral genome or antigenome, typically at an intergenic or other non-coding site, as a separate gene but may be otherwise expressed, for example as a fusion protein.

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— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(88) Date of publication of the international search report:  
19 July 2001

**UNITED STATES**

2001 JUL 30 AM 9:22

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